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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,131	01/26/2001	Satoshi Mizutani	2309/01213	6716

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EXAMINER	
CHEVALIER, ALICIA ANN	
ART UNIT	**PAPER NUMBER**
1772	18

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/771,131	MIZUTANI ET AL.	
	Examiner	Art Unit	
	Alicia Chevalier	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *8 and 9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

RESPONSE TO AMENDMENT

1. Claims 1-17 are pending in the application, claims 8 and 9 are withdrawn from consideration due to Applicant's election, in paper #5 filed May 24, 2002 in response to the restriction in paper #4 mailed May 7, 2002.

2. Amendments to claims in paper #17, filed on September 24, 2003, have been entered in the above-identified application.

WITHDRAWN REJECTIONS

3. The 35 U.S.C. §112, first paragraph, rejection of claims 1-7 and 10-11 ***only***, made of record in paper #16, mailed July 14, 2003, pages 3-4, paragraph #6 have been withdrawn due to Applicant's amendment in paper #17.

4. The 35 U.S.C. §103 rejection of claim 13 as over Sorensen (US Patent No. 4,327,730) in view of Gray et al. (US Patent No. 5,660,788), made of record in paper #16, pages 4-6, paragraph #7 has been withdrawn due to Applicant's amendment in paper #17.

REJECTIONS REPEATED

5. The 35 U.S.C. §112, first paragraph, rejection of claim 12 is repeated for reasons previously made of record in paper #16, pages 3-4, paragraph #6.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation "uppermost portions of respective protrusions defining contact points only at locations where said top sheet comes into contact with a wear's skin" is new matter. The limitation is constructed to mean that only the uppermost portions of the protrusions are in contact with the wear. The Examiner is unable to find support for this limitation in the specification or the drawings. Applicant's response on page 5, the last paragraph, alleges that support may be found on page 11, line 20 thru page 12, line of the specification. Page 11, line 20 thru page 12, line of the specification recites:

> "The load in compression of the protrusions 5, i.e., a LC value thereof preferably falls between 0.05 and 0.5. The LC value indicates the behavior of the protrusions under compression, and is measured by use of the texture feel tester, Katotec's KES. If their LC value is smaller than the lowermost limit of the defined range, the protrusions will be readily crushed by the pressure of the body of wearers. If their LC value is larger than the uppermost limit of the defined range, their compressive resistance will increase and therefore the protrusions will be hard."

This section of the specification only discusses how different load compressions will affect the top sheet, i.e. if the LC is too smaller the protrusions will be crushed and alternatively if the LC is too large the protrusion will feel hard. The section does not recite anything about how or where the top sheet contacts the wear. As such the limitation is deemed to be new matter and should be removed from the claims.

NEW REJECTIONS

6. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Examiner's Summary of the Invention

7. To the best of the Examiner's knowledge, the elected base, or independent, claims of the application, are interpreted as follows:

1. A topsheet comprising
   - a number of perforations
   - formed of a thermoplastic resin
   - particulate material in the resin forming fine convex portions on a body facing surface
   - a plurality of protrusions extending from the body facing surface
   - where the height of each protrusion from the body facing surface is larger than that of each fine convex portion
   - and the protrusion's apexes extend beyond those of the convex portion to define points of contact with the wearer's skin.

11. A topsheet comprising
   - a number of perforations
   - formed of a thermoplastic resin
   - inorganic particulate material in the resin forming fine convex portions on a body facing surface

- a plurality of protrusions extending from the body facing surface
- where the height of each protrusion from the body facing surface is larger than that of each fine convex portion
- and the protrusion's apexes extend beyond those of the convex portion to define points of contact with the wearer's skin.

12. A topsheet comprising
    - a number of perforations
    - formed of a thermoplastic resin
    - particulate material in the resin forming fine convex portions on a body facing surface
    - micropores formed around the particulate material
    - a plurality of protrusions extending from the body facing surface
    - where the height of each protrusion from the body facing surface is larger than that of each fine convex portion
    - uppermost portions of respective protrusions defining contact points only at locations where said top sheet comes into contact with a wearer's skin.
13. A topsheet comprising
    - a number of perforations
    - formed of a thermoplastic resin
    - particulate material in the resin forming fine convex portions on a body facing surface, with a mean particle size in a range of 0.1 μm to 30 μm

- a plurality of protrusions extending from the body facing surface, with a protrusion height in a range greater than 0.0837 mm to 1.0 mm.

14. A topsheet comprising

- a number of perforations
- formed of a thermoplastic resin
- particulate material in the resin forming fine convex portions on a body facing surface
- the fine convex portions includes first fine convex portion of a first grain size and a second fine convex portions of a second grain size which is greater than the first grain size.

15. A topsheet comprising

- a number of perforations
- formed of a thermoplastic resin
- particulate material in the resin forming fine convex portions on a body facing surface
- the fine convex portions includes first fine convex portion of a first grain size and a second fine convex portions of a second grain size which is greater than the first grain size
- a plurality of protrusions extending from the body facing surface
- where the height of each protrusion from the body facing surface is larger than that of each fine convex portion.

16. A topsheet comprising

- a number of perforations
- formed of a thermoplastic resin
- particulate material in the resin forming fine convex portions on a body facing surface
- the fine convex portions includes first fine convex portion of a first grain size and a second fine convex portions of a second grain size which is greater than the first grain size, blending the first and second particulate in a ratio of 40:60.

17. A topsheet comprising

- a number of perforations
- formed of a thermoplastic resin
- particulate material in the resin forming fine convex portions on a body facing surface
- the fine convex portions includes first fine convex portion of a first grain size and a second fine convex portions of a second grain size which is greater than the first grain size, blending the first and second particulate in a ratio of 40:60
- a plurality of protrusions extending from the body facing surface
- where the height of each protrusion from the body facing surface is larger than that of each fine convex portion.

Claim Rejections - 35 USC § 112

8. Claim 1-7, 10, 11, 15 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which

was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 11, 15 and 17 recite, "so that apexes of respective protrusions extend toward a wearer's skin beyond the apexes of said fine convex portions to define contact points which contact the wearer's skin." The specification does not disclose "contact points" which are defined the "apexes of respective protrusions extending toward a wearer's skin beyond apexes of said fine convex portions," therefore this limitation is considered new matter. The passage, specification page 11, lines 5-15, upon which Applicant contents gives support for the new limitations does not discuss "contact points." The passage Applicant has pointed out merely discusses that the protrusions will not function correctly if their height is below the lower limit of the protrusion height range. Furthermore, the only discuss of a "contact area" in the specification is in regard to the fine convex portion, see page 6, line 19.

The new matter should be deleted.

9. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 13 has been amended to now recite "a height of each protrusion being in a range greater than 0.0837 mm to 1.0 mm." The specification does not disclose that the "protrusion height is greater than 0.0837 mm to 1.0 mm," therefore this limitation is considered new matter. The specification only has support for protrusion height ranges of 0.05 mm to 1.0 mm (*page 11, line 6*) and 0.35 mm to 0.55 mm (*page 16, line 7*).

The new matter should be deleted.

10. Claims 14-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 14-17 recite, "said fine convex portions including first fine convex portions defined by exposing a part of a first particulate material having a first grain size and second fine convex portions defined by exposing a part of a second particulate material having a second grain size which is greater than said first grain size." The specification does not discloses that the fine convex portions includes a "a first fine convex portions" with a "first grain size" and "a second fine convex portions" with "second grain size," therefore this limitation is considered new matter. The specification only has support for the top sheet contains two different types of particulate material comprising a blending of 1 micron particles and 10 micron particles in a ratio of 40:60 (*page 7, line 25 bridging page 8, line 8*). Furthermore, the specification only has support for large and small size particles (*specification page 7, lines 10-18*), not first and second grain size.

The new matter should be deleted.

Claim Rejections - 35 USC § 103

11. Claims 1, 2, 5, 7, 10, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorensen (U.S. Patent No. 4,327,730) in view of Gray et al. (U.S. Patent No. 5,660,788).

Sorensen discloses a disposable absorbent article, which comprises a topsheet, for articles such as diapers, bandages, catamenials, and the like (*col. 1, lines 9-13*).

Sorensen discloses a disposable absorbent article (*col. 2, lines 59-60*) comprising a topsheet manufactured from a thermoplastic film that is perforated (*col. 4, lines 1-2*). The topsheet has a plurality of nubbles (*col. 4, lines 17-18*) extending from the body facing surface (*figure 3*). Sorensen's nubbles read on Applicant's claimed "protrusions." As seen in figure 2 the topsheet covers the liquid receiving surface of the absorbent layer (*col. 3, lines 3-5*), which reads on Applicant's intended use limitation "for covering a liquid-receiving surface of an absorbent article." The nubbles have a cross-sectional diameter of from about 0.0127 to about 0.279 mm and a height that is at least 30% of the cross-sectional diameter (*col. 4, lines 33-50*), which makes the height of the nubbles ***greater*** than between 0.00381-0.0837 mm. Since the nubbles have a height greater than 0.0837 mm, it reads on Applicant's claimed "height of each protrusion being in a range greater than 0.0837 mm to 1.0 mm."

The limitation "so that apexes of respective protrusions extend toward a wearer's skin beyond apexes of said fine convex portions to define contact portions which contact the wearer's skin" is a functional limitations and is deemed to be latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP § 2145 (II).

Sorensen fails to disclose that the thermoplastic resin contains a particulate material, which produces fine convex portions.

Gray discloses an absorbent article such as sanity napkins, pantiliners, disposal diapers, incontinent articles, and the like (*col. 1, lines 15-17*). The absorbent article comprises an apertured plastic film/web made of thermoplastic material (*col. 5, lines 20-21*), Applicant's "top

sheet," that includes a particulate material embedded on the wearer-contacting surface of the web (*col. 5, lines 63-65*). The embedded particulate material reads on Applicant's limitation "fine convex portions defined by exposing a part of the particulate material on a body facing surface of the top sheet." The particulate material is talc or clay (*col. 5, lines 65-68*), an inorganic material.

The apertured plastic film/web exhibits a soft, wearer-contacting surface which is not slick, sticky, or plastic-like (*col. 6, lines 7-9*), and. the film/web is compliant, soft feeling and non-irritating to the wearer's skin (*col. 4, lines 47-48*). Furthermore, the addition of the particulate material to the wearer contacting surface of the apertured plastic film/web reduces the plastic like feel associated with such films (*col. 6, lines 13-16*).

Gray further discloses that the size of the particulate material is such that light incident upon the visible surface of the web is substantially diffused into a multiplicity of directions by the particulate material into a multiplicity of direction rather than being speculary reflected, thereby providing a non-glossy visible surface (*col. 6, lines 1-6*).

Gray does not disclose that the particulate material has a mean particle size in a range between 0.1 micrometer and 30 micrometer. However, the exact mean particle size is deemed to be a result effective variable with regard to the ability of the particle to diffuse light and provided a softer feel. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such the mean particle size and amount through routine experimentation in the absence of a showing of criticality in the claimed combined mean article size. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill would have been motivated to optimize the amount of particulate material and mean particle size to the range of 0.1 to 30

micrometers because smaller particles would produce a smoother more uniform touch to the sheet.

Furthermore, since the protrusions have a height of ***greater*** than between 0.00381-0.0837 mm and the particulate material is embedded in the top sheet with a mean particle size of 0.1 to 30 micrometers, the height of each protrusion from the body facing surface is larger than that of each fine convex portion therefrom.

Sorensen and Gray are analogous because they both discuss absorbent articles such as disposable diapers, etc.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add Gray's particulate material to the top sheet of Sorensen in order to improve the feel of the top sheet. One of ordinary skill in the art would have been motivated to use the particulate material in the top sheet of Sorensen because Gray teaches that its particulate containing article have soft wearer contacting surface and the film/web therein is soft feeling and non-irritating and reduces the plastic like feel associated with such top sheets. See Gray at col. 5, lines 63-65; col. 6, lines 7-9 and col. 4, lines 47-48. It is desirable to have absorbent articles with less plastic feel, such as diapers that do not irritate the user's skin.

Regarding Applicant's claim 7, the Applicant's limitation "wherein the protrusions are formed by mechanically stretching the top sheet" is a method limitation and does not determine the patentability of the product itself, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art.

ANSWERS TO APPLICANT'S ARGUMENTS

12. Applicant's arguments in paper #17 regarding the previous rejections of record have been considered but are moot due to the new grounds of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (571) 272-1498. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (571) 272-0987.

ac
1/20/04

SANDRA M. NOLAN
PRIMARY EXAMINER